

Synthetic Siding and Historic Buildings: *What's the Problem?*

Great architectural detail has been hidden on this house for years and is revealed after synthetic siding is removed.



Photos by Sara Hobbs

By Sara Hobbs

Each spring as homeowners begin to think about their old house “to-do list,” the Cleveland Restoration Society tech staff gets calls asking, “To paint or not to paint?” What some owners are really asking is, “What about vinyl siding?” When our staff explains that vinyl and aluminum siding is a discouraged application for an older home, owners don’t always understand why. This article will answer some common questions and clear up some misperceptions about synthetic siding on historic buildings.

Vinyl and aluminum siding applications pose several problems for historic structures. The problems can be broken down in two ways, from a preservation standpoint, and from the technical point of view.

The Preservation Perspective:

- **Siding diminishes the architectural features**
Synthetic siding applications often cover important architectural details on a house like stylized shingles, unique siding, or even more basic features like window casing. In more extreme examples, details like brackets, eyebrows, sills, deep eaves and flared rooflines are cut off

or removed to make siding applications easier. Applying siding over these types of features not only destroys architectural integrity, but also removes any kind of character definition or interest. The National Park Service, the National Trust for Historic Preservation, and State Historic Preservation Offices all prohibit the use of vinyl siding on historic buildings.

• Historic Material

Standard 6 of the *Secretary of the Interior's Standards for Rehabilitation* states that “deteriorated architectural features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials...” The Standards further caution against “removing or radically changing wood features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.” This is one of the most widely practiced guidelines in preservation. You should always repair and replace in kind,

which means that if something was wood you replace or repair with wood.

• Historic Districts/Landmarks

The use of vinyl siding is typically prohibited in National Register and local historic districts. Likewise, if there are too many buildings with applied siding in a potential district, it may be prevented from designation as a historic area at all. Potential landmarks that have vinyl or aluminum siding may be deemed ineligible for historic designation because applied siding is considered a significant alteration of a historic property. These restrictions are in place because of the negative effects applied siding can have on the architecture of a building.

The Technical Perspective:

• Moisture/Rot

Applying a plastic covering to your entire house creates two harmful scenarios: 1) it creates a situation where you can no longer see what’s happening to the body of the structure and 2) it creates a system where moisture is harbored and rot is bred. Moisture is one of the single most damaging forces to an older building.

• Bug Infestations

Much like the moisture scenario, since you can no longer see the body of your house when siding is applied, you become unable to spot bug problems as well as moisture problems. Termites, ants and other carpenter bugs can infest a wood structure, especially if it’s a moist one. With-

out being able to see the signs that damage is occurring, most homeowners don't catch the problem until it becomes severe and penetrates the interior.

- **Environmental**

The creation of vinyl also leads to the creation of a lot of toxic by-products. One of many, Dioxin, has been declared by the EPA as a carcinogen, and once burned its considered toxic waste. In 2007, the US Green Building Council (USGBC) released its report on a PVC avoidance related materials credit for the LEED Green Building Rating system. The report concluded that the "risk of dioxin emissions puts PVC consistently among the worst materials for human health impacts" (Assessment of the Technical Basis for a PVC Materials Credit for LEED, USGBC, 2007).

- **Sustainability**

Not only does the manufacture of the product create nasty things, once we have vinyl siding, we're stuck with it: vinyl cannot be broken down or decomposed naturally. We are in essence creating tons of a product that we can never get rid of.

There is no environmentally safe way to dispose of vinyl so we must depend on the recycling of the product, which because of the number of additives used to make it, is expensive and poses additional hazards. The State of California is currently considering a bill that would ban the use of PVC in packaging due to the threats it poses to human and environmental health and its effect on the recycling stream (AB 2505 (Brownley)).

Siding sales people make many claims, but the products are not the magic bullets that they are purported to be when it comes to these "benefits":

- **Warm and toasty...plastic?**

Vinyl siding is often sold with claims that it increases energy efficiency. R value is the measure of thermal resistance. The higher the R value the better the resistance. Typical vinyl siding has an R value of around one.

- **Enjoy years of maintenance-free...oops...scratch that.**

Like its older brother, aluminum siding before it, vinyl siding has often been described as a maintenance-free product. But as we've all seen, aluminum sid-

ing over the years fades, gathers dirt, and dents. Vinyl siding can warp and cup. It also has poor color retention. There is now an entire industry of companies to refurbish these "maintenance-free" products.

- **You don't have to paint...yet!**

If you are thinking of applying synthetic siding because you don't want to paint every few years, the first question our staff would ask is "Is your paint failing too frequently?" If so, that may point to a larger issue such as a moisture or systems issue, in which case siding won't fix the problem; it will just create a scenario where you can't see it any longer. You need to figure out why your paint is frequently failing. Once that is remedied you won't have to paint as often.

Older houses are built with durable, natural materials that are long lasting and repairable. One of the best things you can do for your older house is maintain its original features like wood siding and other important architectural details. Preservation begins at home with you as the caretaker and steward of your house's history and future. ♦

Removing aluminum siding revealed this extensive bug infestation damage, which had previously been undiscovered.

It appears as though this "maintenance-free" product is in need of some maintenance. Details like window trim and sills are covered in this poor vinyl siding application.

